Canada Border
Services Agency

Agence des services
frontaliers du Canada

Overview:

CBSA Data and Analytics

PROTECTION · SERVICE · INTEGRITY

Canada

Current State – Data and Analytics

- CBSA collects a large amount of data from more than 180 application systems.

  - Some of this data is gradually moved into CBSA's enterprise data repository based on the Agency's Business Intelligence needs.

- Prioritized data sets are moved into an analytics exploratory environment ("protocol environment") for non-operational use to validate business value.

- The analytics exploratory environment was established to address privacy, DSO and legal concerns; document the data and capture metadata; and justify the use of data within the Agency.

- The future data integration strategy will focus on the use of integrated data for advanced analytics and operational uses.

- We are working towards an architecture where data ingested in CBSA's enterprise data repository can be used for both Business Intelligence and Advanced Analytics.

Current Data Sources – Analytics Environment

CBSA currently has a number of data sets in the analytics environment used for the Removals and Trade programs

CBSA Data Set	Description, Retention Period, Records
Canada Post: Point of Call	Third party address information (residence and business addresses), supports address validation provided by Trade community, improves risk assessment strategy • Reference data (point in time: 2016.01.25)
GCMS	GCMS data • 4 years of data to Aug 2019
ICES	Customs enforcement data (out of scope: targets, lookouts, SOIRA records) • Approx. 23 years of data: Feb 1996-Aug 2019
NCMS	NCMS for removal cases • 10 years of data to Apr 2019
Trade	5 years of raw data from CCS and TCMS

• NCMS and GCMS have been combined to gather a better understanding of the removals program.

Current Data Sources –Targeting and Intelligence

CBSA currently has a number of data sets in the EDW. Pending finalization of responses to OPC we will further examine the value of this data for targeting and intelligence.

CBSA Data Set	Description, Retention Period, Records
ACROSS (CEDM)	ACI and release information, examination notes • Updated weekly, subset of 45 tables updated daily • Retention 6 years + current for import, 3 years for export • Over 100 million import records and 8 million export records
Entry/Exit	Inbound traveller data and outbound travellers by land border; Exit data does not contain information on US citizens, Canadian citizens or refugee claimants • Updated daily • Retention 3.5 years • Over 300 million travel records
ICES	One time load of all ICES data including enforcement actions and dispositions, lookouts, target information, export control information, associated traveller, commodity and conveyance information • Retention: Data from Nov 1995-Nov 2015 • Contains 220,000 enforcement records
PAXIS	SBT hits, targets issued • Near real-time • Retention 2.5 years • API, PNR, and IAPI
TITAN (CTAS)	Risk indicator hits, risk scores, referral and examination information • Updated weekly • Retention 6 years + current • Over 100 million risk assessment records

Future Data Sources – Data Acquisition Priorities

Data acquisition prioritization is based on CBSA renewal and modernization priorities

Data Set	Priority Alignment	Description
GCMS, Passage History	Dynamic Risking Targeting & Intelligence Security Screening Automation	Acquisition of further GCMS and Passage History data will support real-time and dynamic risking of people in order to facilitate movement of low risk and focus resources on potential higher risk travellers. GCMS data is also needed to support Targeting and Intelligence, and Security Screening Automation, a priority initiative under Asylum Reform, to facilitate expedited processing of low risk cases allowing CBSA screening analysts to focus on assessment of complex high-risk cases.
IMS	Targeting & Intelligence	Acquisition of IMS data will support advanced threat identification and identify non-compliance.
CAS	All Programs	Acquisition of CAS HR and Finance data will enable enhanced business intelligence and performance measurement capabilities to support improved strategic and operational decision-making and program optimization.

- Technical feasibility assessments and PIA annexes will be completed for each data set

- Other priority data sets will be moved into the exploratory environment and business value assessed through use cases

Data Integration Strategy

- The future data integration strategy in support of the CDO Vision and CBSA Data Strategy will:
    - Enable and simplify descriptive and diagnostic analytics via data curation (organization and integration of data packages)
    - Provide business performance context for analytics projects, audit, and program evaluations
    - Provide a platform to support maturing CBSA's data fluency
    - Employ modern BI to enable data-driven business decision-making as well as holistic performance measurement

Next Steps – Advancing CBSA Data Priorities

- Recent OPC responses on the PIA will allow us to progress on our data acquisition priorities.

- Finalize a multi-year data acquisition work plan to ensure data availability for analytics and other uses. Target March 2020.
  - Data acquisition priorities table working copy:

- Enable the Agency with valuable data for strategic and tactical business decisions by establishing an approved data access strategy and supporting processes.

- Continue to enrich CBSA data holdings through intake of ICES and Canada Post: Point of Call data into the analytics environment, including consideration of all legal, privacy, information-sharing, and other considerations.

Key Milestones & Deliverables

Key Milestones	Deliverables	Target Date
Analysis of consolidated datasets in support of Removals project		Oct 2019
Acquisition of data from IRCC including privacy and legal considerations; integration of IRCC and CBSA data sets; data preparation and integration; analysis		
Integrate geospatial data in Removal case management and target second release		Dec 2019
Data acquisition plan		Mar 2020
Data access strategy and process		Mar 2020

Acronyms

ACI	Advance Commercial Information
ACROSS	Accelerated Commercial Release Operations Support System
API	Advanced Passenger Information
CAS	Corporate Administrative System
CCS	Customs Commercial System
CDEM	Commercial Document and Entity Management
CTAS	Commercial Threat Assessment System
DSO	Departmental Security Officer
EDI	Electronic Data Interchange
EDW	Enterprise Data Warehouse
ICES	Integrated Customs Enforcement System
IMS	Intelligence Management System
GCMS	Global Case Management System
IAPI	Interactive Advance Passenger Information
NCMS	National Case Management System
PAXIS	Passenger Information System
PIA	Privacy Impact Assessment
PNR	Passenger Name Record
SBT	Scenario Based Targeting
SOIRA	Sex Offender Information Registration Act
TCMS	Trade Compliance Management System
TITAN	Automated risk assessment tool used to screen marine commercial shipments